(a) drawing a sample of specified volume from a cleaning bath,

(b) determining alkalinity of the sample using the acid-base reaction with an acid, the determining step being performed by a measuring device,

(c) outputting the result of step (b), and

(d) adding one or more replenishing components to the cleaning bath if the result of step (b) is below a preset value.

Please cancel Claim ~~36~~ without prejudice.

REMARKS

In response to the Office Action dated February 4, 2003, Applicants have amended the claims, which when considered with the following remarks, is deemed to place the present application in condition for allowance. Favorable reconsideration and allowance of all the pending claims as presented herein in view of the foregoing amendment and the following remarks are respectfully requested. Amendments and/or cancellations have been made in the interest of expediting prosecution of this case. Applicants reserve the right to prosecute the same or similar subject matter in this or another application.

Claims 1 and 15-35 are pending. By this Amendment, Claim 1 has been amended to more particularly point out the claimed invention and Claim 36 has been canceled without prejudice. Applicants have attached hereto Appendix A containing a marked up version of original Claim 1. Applicants respectfully submit that no new matter has been added to the subject application nor have any new issues

been raised by this amendment. Moreover, it is submitted that the claims as now presented place the subject application in condition for immediate allowance.

The Examiner has rejected Claims 1 and 15-36 under 35 U.S.C. §103(a) as being obvious over Beck et al. U.S. Patent No. 5,259,960 ("Beck et al.") in view of Surjaatmadja et al. U.S. Patent No. 5,192,509 ("Surjaatmadja et al."). This rejection is respectfully traversed.

Nowhere does Beck et al. disclose or suggest a process for the automatic determination of the alkalinity of one or more cleaning baths containing a surfactant and replenishing said bath as necessary, employing the steps of "determining alkalinity of the sample using an acid-base reaction with an acid ... and ... adding one or more replenishing components to the cleaning bath if the result of the alkalinity determination is below a preset value" as generally recited in amended Claim 1.

Rather, Beck et al. disclose a process for regenerating and recycling contaminated solutions recovered from one or more stages of a multi-stage aluminum or tin plate container or coil washer process. The cleaning solutions in the process of Beck et al. become contaminated not only with oils and dirt from the surface of the aluminum or tin being treated, but also with dissolved metals (referred to as "reaction product" or "RP", which is the amount of aluminum, tin, or other metal present in the used solution). In this manner, the primary goal of Beck et al. is to analyze the amount

of dissolved metal compounds and to remove the content of the metal compounds from the process solution.

To accomplish this step, Beck et al. disclose that the RP value for alkaline cleaning baths is determined by first determining the free alkalinity of the solution, adding potassium fluoride to produce a red color and then titrating the sample with sulfuric acid such that the milliliters of titrant used indicates the RP value. Beck et al. further disclose that the RP value of an acid cleaner bath can be determined by first determining the free alkalinity of the bath, the total acid of the bath and then subtracting the total acid value from the free alkalinity value. As a result of the RP analysis, the contaminants are removed from the process solution, e.g., by precipitating the contaminants (*see* col. 16, lines 25 to 55) and then additional process solution is added. Thus, the alkalinity determination in Beck et al. is described as a way to determine the amount of dissolved contaminants (the "RP analysis"), and *not* to monitor the cleaning capability of the solution. Accordingly, there is no suggestion, motivation or even a hint in Beck et al. of determining the alkalinity of a cleaning bath using an acid-base reaction with an acid and, if the alkalinity is below a preset value, adding one or more replenishing components to the cleaning bath. Therefore, one skilled in the art would be led away by the teachings of Beck et al.

The Examiner alleges on page 5 of the Office Action that "Beck et al. teaches the step of adding one or more replenishing components to the cleaning bath if the result of step (b) above is below a preset value" (col. 20, lines 13-17). However,

while Beck et al. disclose that its cleaning baths "may be regenerated by selectively replenishing chemicals as required" (see col. 20, lines 15-16), nowhere is there any disclosure or suggestion in Beck et al. that its determination of free alkalinity in conducting its RP analysis is used to determine the alkalinity of a cleaning bath using an acid-base reaction with an acid and, if the alkalinity is below a preset value, adding one or more replenishing components to the cleaning bath as set forth in the present claims. To the contrary, as discussed in greater detail above, the alkalinity determination in Beck et al. is described as a way to determine the amount of dissolved contaminants in the cleaning solution and *not* to monitor the cleaning capability of the solution. Thus, the primary goal of Beck et al. is not to determine the alkalinity of a cleaning bath and, if below a preset value, add one or more replenishing components to the bath but to reduce the amount of contaminants of a cleaning solution.

Surjaatmadja et al. does not cure and is not cited as curing the deficiencies of Beck et al. Specifically, nowhere does Surjaatmadja et al. disclose or suggest the automatic determination of the alkalinity of one or more cleaning baths containing a surfactant employing the steps of "determining alkalinity of the sample using an acid-base reaction with an acid ... and ... adding one or more replenishing components to the cleaning bath if the result of the alkalinity determination is below a preset value" as generally recited in amended Claim 1.

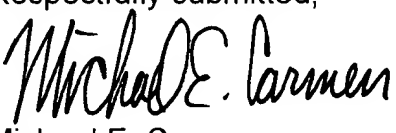
Rather, Surjaatmadja et al. is cited for its disclosure of an automated device for analyzing liquids by titration and not at all to the specifically recited steps of

"determining alkalinity of the sample using an acid-base reaction with an acid...and...adding one or more replenishing components to the cleaning bath if the result of the alkalinity determination is below a preset value".

Since Beck et al., alone or in combination with Surjaatmadja et al., do not disclose or suggest the steps of "determining alkalinity of the sample using an acid-base reaction with an acid ... and ... adding one or more replenishing components to the cleaning bath if the result of the alkalinity determination is below a preset value" as recited in amended Claim 1, amended Claims 1 and 15-35 are believed to be nonobvious, and therefore patentable, over Beck et al. and Surjaatmadja et al.

For the foregoing reasons, amended Claims 1 and 15-35 as presented herein are believed to be in condition for immediate allowance. Such early and favorable action is earnestly solicited.

Respectfully submitted,



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AMENDED CLAIMS MARKED TO SHOW CHANGES

1. (Thrice Amended) A process for automatic determination of the alkalinity of one or more cleaning baths containing surfactant the process comprising the following steps, performed under program control,

(a) drawing a sample of specified volume from a cleaning bath,

(b) determining alkalinity of the sample using the acid-base reaction with an acid, the determining step being performed by a measuring device, [and]

(c) outputting the result of step (b), and

(d) adding one or more replenishing components to the cleaning bath if the result of step (b) is below a preset value.